



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,149	12/23/2003	Susuma Tanaka	0229-0787P	7468

2292 7590 04/13/2006

BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER

MAKI, STEVEN D

ART UNIT	PAPER NUMBER
----------	--------------

1733

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/743,149	<b>Applicant(s)</b> TANAKA, SUSUMA	
	<b>Examiner</b> Steven D. Maki	<b>Art Unit</b> 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,4,5 and 7-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5 and 7-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to:
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1733

- 1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claims 4 and 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8, there is no antecedent basis for "said displacement amount La". What is being displaced? Which direction is it displaced?

Claim 9 is indefinite because (1) claim 9 is dependent on claims 1 or 10, (2) claim 9 refers to "the three dimensional sipe" and (3) the three dimensional sipe in claim 1 is different from the three dimensional sipe in claim 10.

In claim 10, the subject matter at the last three lines is ambiguous. It is unclear *how* a zigzag part of a three dimensional sipe *oscillating at right angles* to the longitudinal direction of the sipe in the course from the tread face to a certain depth can have a *wall surface* made up of *rectangles*. In other words, the description of "rectangles" appears to be inconsistent with the description of "oscillating at right angles" and is thereby confusing. Also, oscillating at right angles (plural) is not understood.

- 3) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- 4) Claims 4 and 8-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 10, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention is the subject matter of "said zigzag part oscillating at right angles to the longitudinal direction of the sipe in the course from tread face to a certain depth so that said three dimensional sipe has wall surface made up of rectangles at the zigzag part". Claim 10 corresponds to the embodiment of figure 5. In the figure 5 embodiment, the zigzag oscillates at a right angle to the longitudinal direction, but does not oscillate in the longitudinal direction. The rectangles illustrated in the bottom left of figure 5 are not the wall surfaces. The rectangles in the bottom left of figure 5 indicate lines P1, P2 on a plane, which is parallel to the longitudinal direction to the sipe. These "rectangles" are formed because the zigzag is not shifted in the longitudinal direction.

In claim 8, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention is the *combination* of the subject matter in claim 10 (directed to the embodiment of figure 5) *and* the subject matter in claim 8 of "displacement amount La" being 0.3 mm to 4.0 mm. In the figure 5 embodiment, the displacement amount La is zero instead of "0.3 mm to 4.0 mm".

Art Unit: 1733

5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Iwamura

6) **Claims 1, 4, 5, 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al (US 6,374,885) in view of Iwamura (US 2003/0029537).**

US 2003/0029537 (filed 7-18-02) to Iwamura remains available as prior art under 35 USC 102(e). US 2003/0029537 may be excluded as 102(e) type prior art under 35 USC 103(c) by submitting the required evidence (a statement) - for example, that the application and the reference were, at the time the invention was made, owned by, or subject to an obligation of assignment to, the same person.

Uchida et al discloses a pneumatic tire having a tread including blocks, grooves and zigzag sipes wherein the tread comprises tread rubber and 2-30 parts short fibers. The **zigzag sipes** are formed by pressing thin plates in the tread rubber during vulcanizing whereby the thin plates orient the short fibers in a radial direction. Uchida et al does not recite providing the zigzag sipe such that the zigzag part oscillates in the longitudinal direction.

As to claims 1 and 9, it would have been obvious to one of ordinary skill in the art to provide Uchida et al's zigzag sipes with the claimed three dimensional shape since Iwamura teaches providing zigzag sipes for blocks in a tire tread with a longitudinal

Art Unit: 1733

oscillating zigzag part formed using a displacement amount La of 0.5 to 2.0 mm such that the walls of the sipe engage and support each other so that the on-ice performance is greatly improved.

As to claim 4, Uchida et al teaches a sipe spacing of less than 10 mm.

As to claim 5, Iwamura suggests a zigzag amplitude of 1-10 mm and a zigzag pitch of 60-100% the zigzag amplitude.

As to claim 7, Iwamura suggests the claimed parallelograms.

Japan 509

**7) Claims 4, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al in view of Japan 509 (JP 2002-321509).**

Uchida et al discloses a pneumatic tire having a tread including blocks, grooves and zigzag sipes wherein the tread comprises tread rubber and 2-30 parts short fibers. The **zigzag sipes** are formed by pressing thin plates in the tread rubber during vulcanizing whereby the thin plates orient the short fibers in a radial direction. Uchida et al does not recite providing the zigzag sipe such that the zigzag part oscillates at right angle to the longitudinal direction to thereby define "rectangles".

As to claims 9 and 10, it would have been obvious to one of ordinary skill in the art to provide Uchida et al's zigzag sipes with the claimed three dimensional shape since Japan 509 suggests providing zigzag sipes with such a three dimensional shape (figures 2, 3) to suppress collapse of a block and offer good braking performance and uneven wear resistance. In the depth direction, Japan 509's sipe demonstrates a *zigzag trace* (figure 3a) At the tread surface, Japan 509 illustrates the sipe as having a

Art Unit: 1733

sine wave trace at the tread surface, but teaches that a *zigzag* trace may be used (paragraph 15 of the machine translation). When using zigzag traces at the tread surface and in the depth direction, Japan 509's three dimensional shape demonstrates the claimed "rectangles" since Japan 509's sipe does not oscillate in the longitudinal direction.

As to claim 4, Uchida et al teaches a sipe spacing of less than 10 mm.

obvious type double patenting

8) The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9) **Claims 1, 4, 5, 7 and 9 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,907,910 in view of Uchida et al (US 6,374,885).**

Art Unit: 1733

Claims 1-10 of US 6,907,910 recite a pneumatic tire having zigzag sipes as claimed in this application, but does not recite the tread as having 1.5 to 25 parts short fibers. However, it would have been obvious to one of ordinary skill in the art to include 1.5 to 25 parts short fibers in 100 parts rubber component in the tread of claims 1-10 of US 6,907,910 since Uchida et al suggests including 2-30 parts short fibers and 100 parts rubber in a tread having zigzag sipes such that the fibers are oriented by the blades used to form the zigzag sipes to improve scratching effect and wet grip performance.

#### **Allowable Subject Matter**

10) **Claims 1, 5 and 7 would be allowable if (1) US 2003/0029537 to Iwamura is removed as 102(e) type prior art under 35 USC 103(c) and (2) the obvious type double patenting rejection is overcome by filing a proper terminal disclaimer.**

#### **Remarks**

11) Applicant's arguments with respect to claims 1, 4, 5 and 7-10 have been considered but are moot in view of the new ground(s) of rejection.

In view of the translation of applicant's foreign priority document filed 1-3-06 and the verification of the translation filed 2-6-06, Europe 1,277,599 (published 1-22-03) is removed as prior art.

12) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



Art Unit: 1733

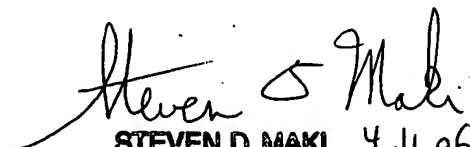
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

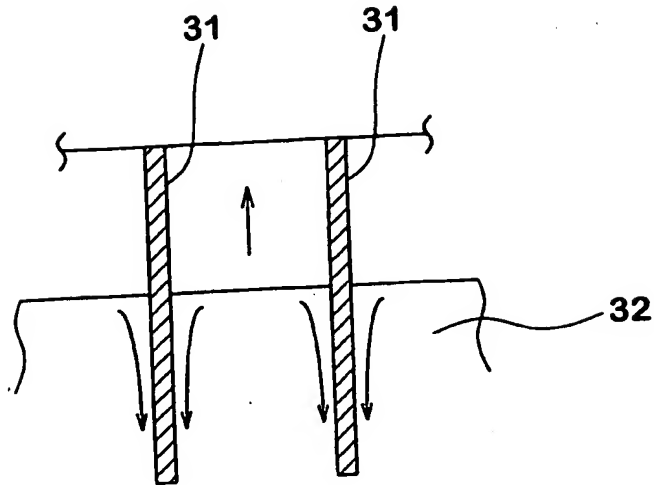
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki  
April 11, 2006

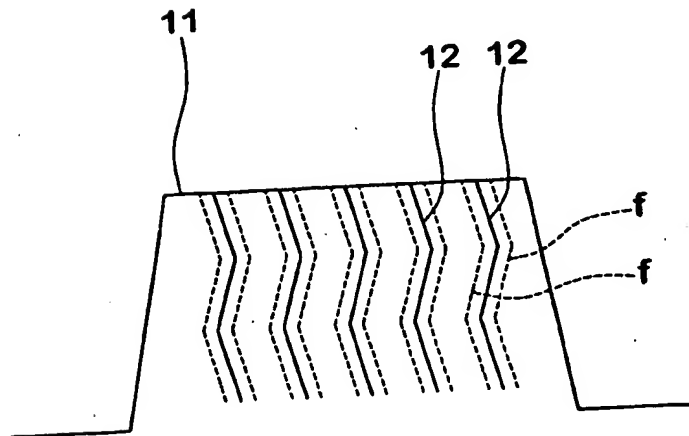
  
STEVEN D. MAKI 4-11-06  
PRIMARY EXAMINER



**FIG. 9(A)**

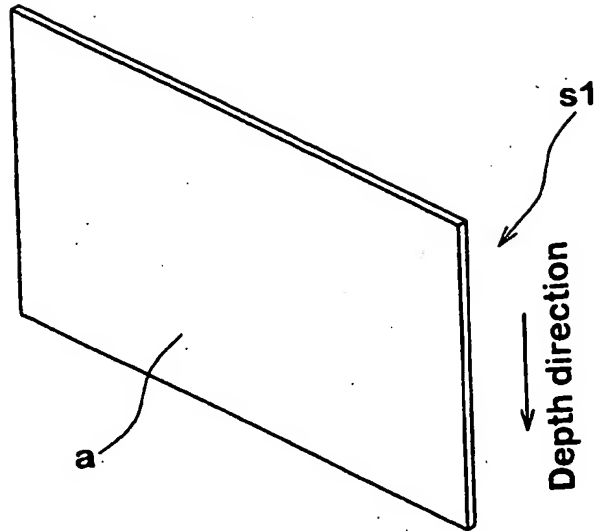


**FIG. 9(B)**

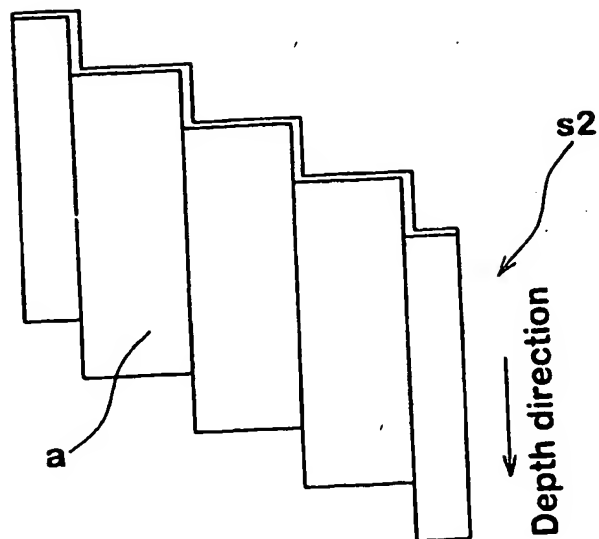


*SM* approved  
and  
4-11-06 accepted

**FIG.10(A)**  
**PRIOR ART**



**FIG.10(B)**  
**PRIOR ART**



dm  
4-11-06  
approved  
and  
accepted